Title 159
Nebraska Administrative Code

Rules and Regulations
Underground Storage Tanks

(Revised 11/25/01)

TITLE 159 - STATE FIRE MARSHAL

RULES AND REGULATIONS FOR UNDERGROUND STORAGE TANKS

Chapter 1 - SCOPE AND DEFINITIONS

001. These regulations shall apply to the operation, maintenance installation, removal or use of underground tanks containing petroleum products and hazardous substances.

002. These regulations shall not apply to substances regulated as hazardous waste under subtitle C of the Federal Solid Waste Disposal Act.

002.01. The following UST systems are excluded from the requirements of this title:

002.01A. Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under Section 402 or 307(b) of the Clean Water Act.

002.01B. Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment.

002.01C. Any UST system whose capacity is 110 gallons or less.

002.01D. Any UST system that contains a *de minimus* concentration of regulated substances.

002.01E. Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

002.02. The following UST systems are classified as deferred tanks. These tanks are excluded at this time from all the requirements of this Title except §005 of Chapter 8:

002.02A. Wastewater treatment tank systems;

002.02B. Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 USC 2011 and following);

002.02C. Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR 50 Appendix A;

002.02D. Airport hydrant fuel distribution systems; and

002.02E. UST systems with field-constructed tanks.

002.03. UST systems used to store fuel solely for use by emergency power generators are deferred for purposes of the release detection requirements in Chapter 7 except that they must perform the tank gauging procedures in §§004.02A through 004.02D of that chapter on a monthly basis.

002.04. UST systems larger than 1,100 gallons used to store heating oil are excluded for purposes of all release detection requirements in Chapter 7 except that they must perform the tank gauging procedures in §§004.02A through 004.02D of that chapter on a monthly basis from April 1 to November 1.

003. DEFINITIONS.

003.01. "Aboveground release" means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

003.02. "Ancillary equipment" means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST.

003.03. "Belowground release" means any release to the subsurface of the land and to ground water. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank.

003.04. "Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials.

003.05. "Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

003.06. "Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

003.07. "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

003.08. "Class I liquids" shall mean liquids having a flash point below 100 degrees Fahrenheit.

003.09. "Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.

003.10. "Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.

003.11. "Consumptive use" with respect to heating oil means consumed on the premises.

003.12. "Corrosion expert" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has

certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

003.13. "Dielectric material" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).

003.14. "Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.

003.15. "Electronic tank monitoring system" shall mean a tank monitoring system capable of accurately measuring inventory and water level, and warning of overfill during bulk deliveries. This system shall also be capable of detecting a leak of 0.2 gallon per hour.

003.16. "Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.

003.17. "Existing tank system" means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before January 1, 1989. Installation is considered to have commenced if:

003.17A. The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,

> **003.17A1.** either a continuous on-site physical construction or installation program has begun; or,
>
> **003.17A2.** the owner or operator has entered into contractual obligations - which cannot be canceled or modified without substantial loss - for physical construction at the site or installation of the tank system to be completed within a reasonable time.

003.18. "Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm

property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

003.19. "Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

003.20. "Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

003.21. "Hazardous substance UST system" means an underground storage tank system that contains a hazardous substance defined in section 101(14) of CERCLA (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

003.22. "Heating oil" means petroleum that is No. 1, No. 2, No. 4 - light, No. 4 - heavy, No. 5 - light, No. 5 - heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

003.23. "Hydraulic lift tank" means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

003.24. "Installation permit" shall mean that permit required for the installation of any tank. Permit applications are obtained from and filed with the State Fire Marshal.

003.25. "Leak detector" shall mean a device which, when installed on a pressure system, will indicate the liquid tightness of the piping and dispenser and restrict flow to a maximum of (3) gallons per minute.

003.26. "Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing product.

003.27. "Monitoring well" shall include observation well, vapor well, lysimeter, soil gas monitor and any device used to monitor vapor or product leakage.

003.28. "NACE" shall mean National Association of Corrosion Engineers, P.O. Box 218340, Houston, TX 77218, (713) 492-0535.

003.29. "New tank system" means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after January 1, 1989. (See also "Existing Tank System.")

003.30. "Operating permit" shall mean that permit required to maintain or use any tank for the storage of regulated substances. Initial operating permits are obtained from the State Fire Marshal.

003.31. "Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under Chapter 10.

003.32. "Operator" shall mean any person in control of, or having responsibility for, the daily operation of a tank but shall not include a person described in 003.034C below.

003.33. "Overfill release" is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

003.34. "Owner" shall mean:

003.34A. In the case of a tank in use on July 17, 1986, or brought into use after such date, any person who owns a tank used for the storage or dispensing of regulated substances.

003.34B. In the case of any tank in use before July 17, 1986, but no longer in use on such date, any person who owned such tank immediately before the discontinuation of its use.

003.034C. "Owner" shall not include a person who, without participating in the management of a tank and otherwise not engaged in petroleum production, refining and marketing:

003.34C1. Holds indicia of ownership primarily to protect his or her security interest in a tank or a lien hold interest in the property on or within which a tank is or was located; or

003.34C2. Acquires ownership of a tank or the property on or within which a tank is or was located:

003.34C2(a). Pursuant to a foreclosure of a security interest in the tank or of a lien hold interest in the property; or

003.34C2(b). If the tank or the property was security for an extension of credit previously contracted, pursuant to a sale under judgment or decree, pursuant to a conveyance under a power of sale contained within a trust deed or from a trustee, or pursuant to an assignment or deed in lieu of foreclosure.

003.34C2(c). Ownership of a tank or the property on or within which a tank is or was located shall not be acquired by a fraudulent transfer, as provided in the Uniform Fraudulent Transfer Act.

003.35. "Permanent closure" shall mean that a tank has been closed in place or removed from the ground in accordance with requirements of Chapter 10. Tanks shall not be classified by the State Fire Marshal as permanently closed until all closure and site assessment requirements are met.

003.36. "Permanently out-of-service tank" means a tank that has been taken out of service pending permanent closure. Tanks may remain out of service for one year and then must be permanently closed in accordance with the requirements of Chapter 10.

003.37. "Person" shall mean any individual, firm, joint venture, partnership, corporation, association, political subdivision, cooperative association, or joint-stock association, and includes any trustee, receiver, assignee, or personal representative thereof owning or operating a tank.

003.38. "Public water supply system" shall mean a water supply system designed to provide piped water fit for human consumption, if such system has at least 15 service connections.

003.39. "Registration permit" shall mean the annual permit owners of all tanks must secure by January 1 of each year.

003.40. "Regulated substance" shall mean:

003.40A. Any hazardous substance defined in section 101(14) of CERCLA, but not including any substance regulated as a hazardous waste under subtitle C of such act.

003.40B. Any petroleum product including, but not limited to, petroleum-based motor or vehicle fuels, gasoline, kerosene, and other products used for the purposes of generating power, lubrication, illumination, heating, or cleaning, but shall not include propane or liquified natural gas.

003.41. "Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from a tank or any over-filling of a tank into ground water, surface water or subsurface soils.

003.42. "Release detection" is a determination that a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

003.43. "Repair" means to restore a tank or UST system component that has caused a release of product from the UST system.

003.44. "Residential tank" is a tank located on property used primarily for dwelling purposes.

003.45. "Septic tank" is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

003.46. "State Fire Marshal" shall also mean appropriate State Fire Marshal delegated authority.

003.47. "Storm-water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial,

or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

003.48. "Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

003.49. "Tank" shall mean any tank or combination of tanks, including underground pipes connected to such tank or tanks, which is used to contain an accumulation of regulated substances and the volume of which is ten percent or more beneath the surface of the ground. Tank shall not include any:

003.49A. Farm or residential tank of one thousand one hundred gallons or less capacity used for storing motor fuel for consumptive use on the premises where stored, subject to a one-time fee.

003.49B. Tank with a storage capacity of one thousand one hundred gallons or less used for storing heating oil for consumptive use on the premises where stored, subject to a one-time fee.

003.49C. Septic Tank

003.49D. Tank situated in an underground area such as a basement, cellar, mineworking, drift, shaft, or tunnel if the tank is situated on or above the surface of the floor.

003.49E. Pipeline facility, including gathering lines:

003.49E1. Regulated under the Natural Gas Pipeline Safety Act of 1979, 49 U.S.C. App. 1671;

003.49E2. Regulated under the Hazardous Liquid Pipeline Safety Act of 1979, 49 U.S.C. App. 2001; or

003.49E3. Which is an intrastate pipeline regulated under state law comparable to the laws prescribed in §§003.20E1 and 003.20E2 above.

003.49F. Surface impoundment, pit, pond, or lagoon.

003.49G. Flow-through process tank.

003.49H. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations.

003.49I. Storm water or wastewater collection system.

003.50. "Temporarily out-of-service tank" means a tank that has been taken out of service pending a return to active storage. Tanks may be temporarily taken out of service for a period of time determined by the requirements in Chapter 10.

003.51. "Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

003.52. "UST system" or "Tank System" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

003.53. "Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

Legal Citation: Title 159, Chapter 1
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 2 - TANK REGISTRATION AND PERMITS

001. REQUIRED TANK REGISTRATIONS

001.01. FARM, RESIDENTIAL AND HEATING OIL TANKS WITH STORAGE CAPACITY LESS THAN 1,100 GALLONS.

Owners of farm, residential and heating oil tanks with storage capacity less than 1,100 gallons (as defined in §§003.49A and 003.49B of Chapter 1) shall register said tanks with the State Fire Marshal. Registration forms shall be provided by and filed with the State Fire Marshal. The one-time registration shall be accompanied by a fee of five dollars and shall be valid until the State Fire Marshal is notified that a tank so registered has been permanently abandoned. Such registration shall specify the ownership of, location of, and substance stored in the tank to be registered.

001.02. PERMANENTLY ABANDONED TANKS.

Owners of tanks permanently abandoned shall register said tanks with the State Fire Marshal. The one-time registration shall be made on forms provided by the State Fire Marshal. There will be no fee for this registration permit.

001.03. ALL OTHER REGULATED TANKS

Owners of all tanks not included in §§001.01 and 001.02 above shall annually register each tank. The registration permit shall expire on December 31 of the year of issuance.

001.03A. Applications for registration permits shall be provided by and filed with the State Fire Marshal's office.

001.03B. The registration fee shall be $30.00 per tank.

002. TANK OPERATING PERMIT

002.01. No person shall maintain or use any tank for the storage of regulated substances without first obtaining a permit from the State Fire Marshal.

002.01A. Owners of all tanks used to store regulated substances shall receive a temporary operating permit from the State Fire Marshal at the time of the tank's initial registration pursuant to §003 of this chapter.

002.01B. Temporary operating permits shall be valid until such time as the State Fire Marshal, Flammable Liquid Storage Tank Division conducts an inspection. Once a tank meets all state requirements, a permanent operating permit shall be issued.

003. TANK INSTALLATION PERMIT

003.01. Owners shall obtain an installation permit for all new tank and replacement tank installations and piping installations, and all piping replacement installations in which more than 50% of the product lines are being replaced.

003.01A. Applications for installation permits shall be provided by and filed with the State Fire Marshal's office. Applications must be submitted at least ten (10) working days prior to the proposed installation and must include payment of a $50.00 per tank fee. Installations of piping only shall require a fee of $50.00, regardless of the number of tank connections.

003.01B. Tank installations shall meet all criteria set out in Chapter 4, "Design and Installation Standards for New UST Systems" and shall be accomplished only by persons certified as tanks installers pursuant to Chapter 3.

004. TANK CLOSURE PERMIT

004.01. A permit shall be obtained prior to all tank closures. Persons removing tanks or causing tanks to be removed shall be required to obtain a closure permit even though they are not an owner or operator as defined in Chapter 1 of this Title. Tanks may be closed by either removal or closure in place. Applications for closure permits shall be provided by and filed with the State Fire Marshal. All tank closures shall be supervised by persons certified as tank closers pursuant to Chapter 3. If a closure assessment is required, the closure assessment report shall be submitted to the State Fire Marshal within 45 days of closure.

005. PERMIT DENIAL AND REVOCATION

Persons whose application for a permit is denied or revoked shall have the right to request a hearing under procedures established by the State Fire Marshal. When the State Fire Marshal has reason to believe that a permit holder's activities create an immediate threat to public safety, a permit may be suspended until the hearing process is complete. Any person aggrieved by a final decision of the State Fire Marshal may appeal such action pursuant to State Statutes 84-917 to 84-919, N.R.S.

Legal Citation: Title 159, Chapter 2
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 3 - CONTRACTOR LICENSING AND CERTIFICATION

001. After April 1, 1989, no person, association, partnership or corporation shall contract for the installation or permanent closure of an UST without first obtaining a license from the State Fire Marshal.

001.01. Every underground storage tank installation/closure contractor shall employ at least one person certified by the State Fire Marshal as a tank installer/closer. A certified person shall personally supervise all tank installations and closures.

001.02. Every underground storage tank installer/closer contractor shall maintain a minimum of five hundred thousand dollars of general liability insurance which includes coverage relating to the closure and/or installation of underground storage tanks.

002. After April 1, 1989, no person shall install or close, or supervises the installation or closure of an underground storage tank without prior certification by the State Fire Marshal as to the qualifications of such persons to install or close tanks.

002.01. Qualification for certification shall be proved by successful completion of a written examination which measures the applicant's technical knowledge and familiarity with state regulations.

002.02. Certification shall be renewed and the certification examination shall be successfully completed every three (3) years from date of certification.

002.03. The tank installer and tank closer certification tests shall be given quarterly at different locations throughout the State. An applicant who has properly applied for an examination may take the examination unsuccessfully a maximum of two (2) times. After two unsuccessful attempts, a person must wait a minimum of six (6) months before re-applying for certification.

003. CATHODIC PROTECTION TESTER CERTIFICATION.

003.01. After January 1, 2002, all persons who conduct cathodic protection testing on underground storage tank systems shall be certified in a manner acceptable to the State Fire Marshal and shall be able to provide proof that the minimum requirements of Chapter 1 §003.06 have been met.

003.01A. Qualification for certification shall be proven by successful completion of an examination which measures the applicant's technical knowledge.

003.01B. In addition to the examination required in 003.01A the applicant shall successfully complete a written examination administered by the State Fire Marshal which measures the applicant's knowledge of state underground storage tank (UST) requirements.

003.01C. Proof of successful completion of the education requirement of 003.01 shall be submitted to the State Fire Marshal prior to taking the examination required by 003.01B and prior to conducting any required cathodic protection testing on underground storage tanks and/or associated piping.

003.01D. Certification shall be renewed and the certification examination shall be successfully completed at least every three (3) years from date of last certification.

004. LICENSE AND CERTIFICATION

004.01. The State Fire Marshal may refuse to renew or may revoke or suspend a license or certificate for any of the following reasons:

004.01A. Gross incompetence or gross negligence in the installation or closure of an underground storage tank.

004.01B. Use of false evidence or misrepresentation in an application for a license or certificate.

004.01C. Knowingly violating the rules or regulations adopted and promulgated under Title 159, Nebraska Administrative Code.

005. LICENSE AND CERTIFICATION DENIAL AND REVOCATION PROCEDURES

005.01. Before the State Fire Marshal denies an application for a license or certificate, the affected person shall be given notice and opportunity for a hearing under procedures established by the State Fire Marshal. Upon receipt of the notification, any person aggrieved by the denial or revocation of a license or certificate may request a hearing. Any person aggrieved by a final decision of the State Fire Marshal may appeal such action pursuant to Section 84-917 to 84-919, R.R.S. 1943.

Legal Citation: Title 159, Chapter 3
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 4 - DESIGN AND INSTALLATION STANDARDS FOR NEW UST SYSTEMS

001. All installations of new underground storage tank systems shall meet the specifications and requirements found in this chapter.

002. DESIGN STANDARDS

002.01. Tanks shall be designed and built in accordance with recognized good engineering standards for the material of construction being used, and shall be of steel, fiberglass reinforced plastic, or steel-fiberglass-reinforced plastic composite.

002.01A. Recognized good engineering standards include:

CATHODICALLY PROTECTED STEEL TANKS:

Steel Tank Institute "Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks";

Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks";

Underwriters Laboratories of Canada CAN4-S603-M85, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids," and CAN4-G03.1-M85, "Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids, " and CAN4-S631-M84, "Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems"; or

National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids."

FIBERGLASS-REINFORCED PLASTIC (FRP):

Underwriters Laboratories Standard 1316, "Standard for Glass- Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products";

Underwriter's Laboratories of Canada CAN4-S615-M83, "Standard for Reinforced Plastic Underground Tanks for Petroleum Products"; or

American Society of Testing and Materials Standard D4021-86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks."

STEEL-FIBERGLASS-REINFORCED PLASTIC-COMPOSITE:

Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for UST's"; or

Association for Composite Tanks ACT-100, "Specification for the Fabrication of FRP Clad USTs."

002.01B. The material of tank construction shall be compatible with the liquid to be stored. In case of doubt about the properties of the liquid to be stored, the supplier or producer of the liquid shall be consulted. Otherwise, the tank manufacturer should be consulted to assure compatibility.

003. CATHODIC PROTECTION

003.01. All steel tanks shall be cathodically protected in the following manner:

003.01A. The tank is coated with a suitable dielectric material;

003.01B. Field-installed cathodic protection systems are designed by a corrosion expert;

003.01C. Impressed current systems are designed to allow determination of current operating status as required in §002.03 of Chapter 6; and

003.01D. Cathodic protection systems are operated and maintained in accordance with §002 of Chapter 6.

004. NEW TANK INSTALLATION

004.01. The installation of a new tank shall be carried out in accordance with the manufacturer's recommendations and accepted engineering practices, such as:

Petroleum Equipment Institute/RP100

American Petroleum Institute Publication 1615

004.02. Owners shall obtain an installation permit for all new tank and new piping installations (Chapter 2). New tanks shall be installed only by certified installers pursuant to the requirements of Chapter 3.

004.03. All new tanks, their welds, seams and connecting fittings must be tested prior to installation for tightness using standard engineering practices.

004.03A. Preinstallation tank testing shall be in accordance with Petroleum Equipment Institute/RP 100 or the tank manufacturer's installation instructions.

004.03B. All new single-wall tanks will be tested with three (3) to five (5) psig of air pressure. Gauges must have a scale that will permit detection of small changes in pressure. A gauge with a maximum limit of 10 to 15 psig is required. The test will include the application of a soap solution over the entire surface of the tank and its fittings, followed by careful inspection for bubbles. The soap solution should be applied uniformly with a mop or spray.

004.03C. All new double-walled tanks will be tested with three (3) to five (5) psig of air pressure. Gauges must have a scale that will permit a detection of small changes in pressure. A gauge with a maximum limit of 10 to 15 psig is required. The test will include pressurizing the inner tank to five (5) psig then sealing the inner tank disconnecting the external air

supply, and monitoring the pressure for one hour. The interstice shall be tested using the air from the inner tank. A second gauge must be used in monitoring the interstice. The entire surface of the tank shall be soaped followed by a careful inspection for bubbles. The soap solution should be applied uniformly with a mop or spray.

004.03D. All defects or scratches in the tanks coating shall be repaired in a manner approved by the manufacturer.

004.04. Backfill material shall be pea gravel, crushed rock, or clean sand free of cinders, stones, and any other foreign material. Tank installation instructions may require specific aggregate sized crushed rock or gravel. Instructions may also specify mechanical compaction or layered placement of bedding and backfill. The installation instructions provided by the manufacturer must always be consulted prior to installation.

004.05. Steel underground tanks shall be covered with a minimum of two (2) feet (0.60 m) of backfill, or shall be covered with not less than one (1) foot (0.30 m) of backfill, on top of which shall be placed a slab of reinforced concrete not less than four (4) inches (10 cm) thick. When they are, or are likely to be, subjected to traffic they shall be protected against damage from vehicles passing over them by at least three (3) feet (0.90 m) of backfill, or 18 inches (45.7 cm) of well-tamped backfill plus either six (6) inches (15 cm) of reinforced concrete or eight (8) inches (20 cm) of asphaltic concrete. When asphaltic or reinforced concrete paving is used as part of the protection, it shall extend at least one (1) foot (0.30 m) horizontally beyond the rim of the excavation in all directions.

004.06. Anchoring of tanks shall be required whenever there is a possibility of tank flotation. When anchoring tanks equipped with cathodic protection the straps must be electrically isolated from the tanks. Straps must be provided or approved by the tank manufacturer. Anchoring of all tanks shall be performed in accordance with the tank manufacturer's specifications or accepted engineering practices. Prevention of tank flotation through increased overburden shall be allowed only if approved by the tank manufacturer.

004.07. Owners and operators must use the following spill and overfill prevention equipment:

004.07A. Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe. If a spill catchment basin is used to meet this requirement it must be capable of holding three gallons of product; and

004.07B. Overfill prevention equipment that will:

004.07B1. Automatically shut off flow into the tank when the tank is no more than 95 percent full; or

004.07B2. Alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm; or

004.07B3. Restrict flow 30 minutes prior to overfilling, alert the operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.

004.08. Owners and operators are not required to use the spill and overfill prevention equipment specified in §004.07A if:

004.08A. Alternative equipment is used that is determined by the State Fire Marshal to be no less protective of human health and the environment as the equipment specified in §004.07A and 004.07B above; or

004.08B. The UST system is filled by transfers of no more than 25 gallons at a time.

004.09. All new UST systems must be equipped with one method of release detection as outlined in Chapter 7.

004.10. All new underground product pipes must be made of fiberglass reinforced plastic or cathodically protected, coated, iron or steel and must be designed, fabricated and installed in accordance with recognized standards such as:

-NACE Standard RP-01-69
-Underwriters Laboratories Subject 971
-American Petroleum Institute Publication 1632
-PEI RP 100

NOTE: Galvanized piping shall not be used for product lines.

004.10A. Before underground piping is installed, the trench shall receive as a minimum a six (6) inch deep bed of well compacted, coarse-grained homogeneous material such as clean sand or pea gravel. All trenches shall be wide enough to permit at least six (6) inches of coarse-grained homogeneous backfill material around all lines.

004.10A1. Vent and fill lines must be coated but need not be cathodically protected. Product lines must be cathodically protected unless made of fiberglass.

004.10B. All product lines shall slope a minimum of 1/8 of inch per foot towards the tank and be installed in a single trench between the tank area and pump island. All vent lines shall slope a minimum of 1/8 inch per foot towards the tank and be installed in a single trench.

004.10C. All unions and fittings shall be a minimum of 250 lb. All joints, damaged pipe coating or unprotected threads shall be wrapped or coated with a material approved by the manufacturer.

004.10D. All new product lines shall be pneumatically tested for tightness with air pressure. All joints, seams and connections shall be soaped to detect leakage. For non-metallic piping the entire surface as well as joints and connections shall be soaped. The test shall be maintained for a minimum of one (1) hour, and all soaped areas shall be visually inspected for bubbles or any other indication of a leak. Piping shall be tested at not less than 50 psig at the highest point of the system. Any loss of pressure or appearance of bubbles shall constitute failure of the test.

004.10E. All product supply lines which are used in conjunction with remote pumping systems shall be installed with a product-line leak detector in accordance with the manufacturer's installation instructions. Leak detectors shall be checked and tested at least annually according to the manufacturer's specification to insure proper installation and operation. Records of these tests must be kept on site.

004.10F. All conventional suction systems shall have no more than one check valve per pump.

004.10G. Field-installed cathodic protection systems shall be designed by a corrosion expert.

004.11. Alternate methods of piping construction and corrosion protection used to meet the requirements of this chapter may be approved by the SFM and shall be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in 004.10 above.

004.12. When any portion of an UST system is installed within 500 feet of a public water supply, that portion shall be equipped with secondary containment. Secondary containment shall mean either a single-walled tank and piping system with an excavation liner or a double-walled tank and piping system as specified in 004.13B below.

004.12A. Safe suction piping is not required to meet the requirements of this section.

004.13. Underground storage tank systems storing hazardous substances as defined in §003.21 in Chapter 1 shall meet the following requirements:

004.13A. Release detection at existing UST systems must meet the requirements for petroleum UST systems in §002 of Chapter 7. All existing hazardous substance UST systems must meet the release detection requirements for new systems in subsection 004.13B below by December 22, 1998.

004.13B. Release detection at new hazardous substance UST systems must meet the following requirements:

004.13B1. Secondary containment systems must be designed, constructed and installed to:

004.13B1(a). Contain regulated substances released from the tank system until they are detected and removed;

004.13B1(b). Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

004.13B1(c). Be checked for evidence of a release at least every 30 days.

004.13B2. Double-walled tanks must be designed, constructed, and installed to:

004.13B2(a). Contain a release from any portion of the inner tank within the outer wall; and

004.13B2(b). Detect the failure of the inner wall.

004.13B3. External liners (including vaults) must be designed, constructed, and installed to:

004.13B3(a). Contain 100 percent of the capacity of the largest tank within its boundary;

004.13B3(b). Prevent the interference of precipitation or ground-water intrusion with the ability to contain or detect a release of regulated substances; and

004.13B3(c). Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

004.13B4. Underground piping must be equipped with secondary containment that satisfies the requirements of §004.13B1 above (e.g., trench liners, jacketing of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with §005.01 of Chapter 7.

004.13B5. Other methods of release detection may be used if owners and operators:

004.13B5(a). Demonstrate to the State Fire Marshal that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in §§004.02-004.08 of Chapter 7 can detect a release of petroleum;

004.13B5(b). Provide information to the State Fire Marshal on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

004.13B5(c). Obtain approval from the State Fire Marshal to use the alternate release detection method before the installation and operation of the new UST system.

004.14. All used steel and fiberglass reinforced plastic tanks shall require the manufacturer's certification for re-installation. Installations shall follow all procedures set out in §004 of this chapter.

Legal Citation: Title 159, Chapter 4
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 5 - UPGRADING REQUIREMENTS FOR EXISTING UST SYSTEMS

001. Not later than December 22, 1998, all existing UST systems must comply with one of the following requirements:

001.01. New UST system performance standards under Chapter 4;

001.02. The upgrading requirements in §§002. through 004. below; or

001.03. Closure requirements under Chapter 10, including applicable requirements for corrective action under Department of Environmental Quality regulations.

002. TANK UPGRADING REQUIREMENTS.

Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

002.01. Interior lining. A tank may be upgraded by internal lining if:

002.01A. The tank is either tightness tested within six months prior to the lining and the results are submitted to the State Fire Marshal or another approved method of monthly monitoring has been in place for six months prior to lining, and

002.01B. The internal lining is installed by a contractor or person registered with the State Fire Marshal FLST Division, and

002.01C. The owner submits notification of intent to upgrade by means of internal lining, along with any ATG, soil vapor, ground water or interstitial monitoring records or tightness test results prior to lining, and

002.01D. The lining is installed in accordance with the requirements of §004 in Chapter 6, and

002.01E. Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

002.02. Cathodic protection. A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of §§003.01B through 003.01D in Chapter 4, the owner submits notification of intent to upgrade by cathodic protection, and the integrity of the tank is ensured using one of the following methods:

002.02A. The tank is internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system; or

002.02B. The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with §§004.04 through 004.08 in Chapter 7; or

002.02C. The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of §004.03 in Chapter 7. The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three (3) and six (6) months following the first operation of the cathodic protection system; or

002.02D. The tank is assessed for corrosion holes by a method that is determined by the State Fire Marshal to prevent releases in a manner that is no less protective of human health and the environment than §§002.02A through 002.02C above.

002.03. Internal lining combined with cathodic protection. A tank may be upgraded by both internal lining and cathodic protection if:

002.03A. The lining is installed in accordance with the requirements of §004 in Chapter 6; and

002.03B. The cathodic protection system meets the requirements of §§003.01B through 003.01D in Chapter 4. [*Note:* The following codes and standards may be used to comply with this section:

American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks";

National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection";

National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"; and

American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems."]

003. PIPING UPGRADING REQUIREMENTS.

Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of §004.10 in Chapter 4.

004. SPILL AND OVERFILL PREVENTION EQUIPMENT.

To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in §004.07 in Chapter 4.

Legal Citation: Title 159, Chapter 5
Nebraska State Fire Marshal

Chapter 6 - GENERAL OPERATING REQUIREMENTS FOR EXISTING UST SYSTEMS

001. SPILL AND OVERFILL CONTROL.

001.01. Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

[*Note:* The transfer procedures described in National Fire Protection Association Publication 385 may be used to comply with §001.01 above. Further guidance on spill and overfill prevention appears in American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," and National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code."]

001.02. The owner and operator must report, investigate, and clean up any spills and overfills in accordance with §004 in Chapter 8.

002. OPERATION AND MAINTENANCE OF CATHODIC PROTECTION.

All owners and operators of steel UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store regulated substances:

002.01. All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

002.02. All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

002.02A. Frequency. All cathodic protection systems must be tested within 6 months of installation; and

002.02A1. Impressed Current cathodic protection systems shall be tested annually thereafter; and

002.02A2. Galvanic or Sacrificial Anode cathodic protection systems shall be tested at least every three years thereafter.

002.02B. Inspection criteria. The criteria that are used to determined that cathodic protection is adequate as required by this section must be in accordance with a code of practice developed by a nationally recognized association.

[*Note*: National Association of Corrosion Engineers Standard RP-0285, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used to comply with §002.02B above.]

002.02C. Cathodic Protection Tester Qualifications. Cathodic protection testing shall be performed by those testers who are certified pursuant to §003 of Chapter 3.

002.03. UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is running properly.

002.04. For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with §005 of this Chapter) to demonstrate compliance with the performance standards in this section. These records must provide the following:

002.04A. The results of the last three inspections required in §002.03 above; and

002.04B. The results of testing from the last two inspections required in §002.02 of this Chapter.

003. COMPATIBILITY.

Owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

[*Note*: Owners and operators storing alcohol blends may use the following codes to comply with the requirements of this section:

American Petroleum Institute Publication 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations"; and

American Petroleum Institute Publication 1627, "Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations."]

004. REPAIRS ALLOWED.

Owners and operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

004.01. Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

[*Note*: The following codes and standards may be used to comply with §004.01 of this chapter: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Publication 2200, ""Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines"; American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks"; and National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection."]

004.02. Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of

practice developed by a nationally recognized association or an independent testing laboratory.

004.03. Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

004.04. Repaired tanks and piping must be tightness tested in accordance with §004.03 and §005.02 in Chapter 7 within 30 days following the date of the completion of the repair except as provided in subsections §004.04A and §004.04B below:

004.04A. The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in §004.04 through §004.08 in Chapter 7; or

004.04B. Another test method is used that is determined by the State Fire Marshal to be no less protective of human health and the environment than those listed above.

004.04C. Another test method is used that is determined by the State Fire Marshal to be no less protective of human health and the environment than those listed above.

004.05. Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with §§002.02 and 002.03 in this chapter to ensure that it is operating properly.

004.06. UST system owners and operators must maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of this section.

005. TANK GAUGING.

A monitoring system based on tank gauging procedures shall be required for all tanks. Tank gauging procedures are set out in §004.01 and §004.02 of Chapter 7 and shall be implemented until an approved release detection method is in place.

006. REPORTING AND RECORDKEEPING.

Owners and operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the State Fire Marshal and Department of Environmental Quality as well as requests for document submission, testing, and monitoring by the owner or operator.

006.01. Reporting. Owners and operators must submit the following information to the State Fire Marshal:

006.01A. Registration for all UST systems (see Chapter 2);

006.01B. Reports of all releases including suspected releases (see Chapter 8), spills and overfills (see §001 of this chapter). Reported or suspected releases of regulated substances from any tank must be reported to the State Fire Marshal and the Department of Environmental Quality within 24 hours by the owner or the person in charge of the tank. The State Fire Marshal and the Department of Environment Quality can be contacted at their offices during normal working hours, and at (402) 471-4545 after hours.

006.01C. Initial abatement measures taken in response to a release.

006.02. Record keeping. Owners and operators must maintain the following information:

006.02A. Inventory control or tank gauging records;

006.02B. Documentation of operation of corrosion protection equipment (§002 above);

006.02C. Documentation of UST system repairs (§004.06 above);

006.02D. Recent compliance with release detection requirements in §006 of Chapter 7; and

006.02E. Results of the site investigation conducted at permanent closure (§005 of Chapter 10).

006.03. Availability and Maintenance of Records. Owners and operators must keep the records required either:

006.03A. At the UST site and immediately available for inspection by the State Fire Marshal; or

006.03B. At a readily available alternative site approved by the State Fire Marshal.

[*Note*: In the case of permanent closure records required under §005 of Chapter 10, owners and operators are also provided with the additional alternative of mailing closure records to the State Fire Marshal if they cannot be kept at the site or an alternative site as indicated above.]

Legal Citation: Title 159, Chapter 6
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 7 - RELEASE DETECTION REQUIREMENTS

001. GENERAL REQUIREMENTS FOR ALL UST SYSTEMS.

Owners and operators of new and existing UST systems must provide a method, or combination of methods, of release detection that:

001.01. Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;

001.02. Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and

001.03. Meets the performance requirements in §004 or §005 of this chapter, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, methods used after January 1, 1991 except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in §§004.02, 004.03 and 004.04 or §§005.01 and 005.02 of this chapter with a probability of detection of 0.95 and a probability of false alarm of 0.05.

001.04. When a release detection method operated in accordance with the performance standards in §§004 and 005 of this chapter indicates a release may have occurred, owners and operators must notify the State Fire Marshal within 24 hours in accordance with §006.01B in Chapter 6.

001.05. Owners and operators of all UST systems must comply with the release detection requirements of §§004.01 and 004.02 of this chapter. All other release detection requirements must be complied with by December 22 of the year listed in the following table:

Schedule for Phase-in of Release Detection

Year System Was Installed	Year When Release Detection is Required (by December 22 of the year indicated)				
	1989	1990	1991	1992	1993
Before 1965 or date unknown	RD	P			
1965 - 1969		P/RD			
1970 - 1974		P	RD		
1975 - 1979		P		RD	
1980 - 1988		P			RD
New Tanks (after January 1, 1989)	Immediately upon installation				

P = Must begin release detection for all pressurized piping in accordance with §002.02A and §003.02D below.

RD = Must begin release detection for tanks and suction piping in accordance with §002.01, §002.02B, and §003 below.

001.06. Any existing UST system that cannot apply a method of release detection that complies with the requirements of this section must complete the permanent closure procedures in Chapter 10 by the date on which release detection is required for that UST system under section 001.05 of this chapter.

002. REQUIREMENTS FOR PETROLEUM UST SYSTEMS.

Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

002.01. Tanks. Tanks must be monitored at least every 30 days for releases using one of the methods listed in §§004.04 through 004.08 below except that:

002.01A. UST systems that meet the performance standards in Chapter 4 or Chapter 5, and the monthly inventory control requirements in §004.01 or §004.02 of this chapter, may use tank precision testing (conducted in accordance with §004.03 below) at least every 5 years until December 22, 1998, or until 10 years after the tank is installed or upgraded under §002 in Chapter 5, whichever is later;

002.01B. UST systems that do not meet the performance standards in Chapter 4 or Chapter 5 may use monthly inventory controls (conducted in accordance with §004.01 or §004.02 of this chapter) and annual precision testing (conducted in accordance with §004.03 below) until December 22, 1998, when the tank must be upgraded under Chapter 5 or permanently closed under §002 in Chapter 10; and

002.01C. Tanks with capacity of 1000 gallons or less may use weekly tank gauging in accordance with §004.02 below.

002.02. Piping. Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

002.02A. Pressurized piping. Underground piping that conveys regulated substances under pressure must:

002.02A1. Be equipped with an automatic line leak detector conducted in accordance with §005.01 below; and

002.02A2. Have an annual line tightness test conducted in accordance with §005.02 below or have monthly monitoring conducted in accordance with §005.03 below.

002.02B. Suction piping. Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every 3 years and in accordance with §005.02 below, or use a

monthly monitoring method conduct in accordance with §005.03 below. No release detection is required for suction piping that is designed and constructed to meet the following standards:

002.02B1. The below-grade piping operates at less than atmospheric pressure;

002.02B2. The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

002.02B3. Only one check valve is included in each suction line;

002.02B4. The check valve is located directly below and as close as practical to the suction pump; and

002.02B5. A method is provided that allows compliance with §§002.02B2 - 002.02B4 to be readily determined.

003. REQUIREMENTS FOR HAZARDOUS SUBSTANCE UST SYSTEMS.

Owners and operators of hazardous substance UST systems must provide release detection that meets the following requirements:

003.01. Release detection at existing UST systems must meet the requirements for petroleum UST systems in §002 above. By December 22, 1998, all existing hazardous substance UST systems must meet the release detection requirements for new systems in §003.02 below.

003.02. Release detection at new hazardous substance UST systems must meet the following requirements:

003.02A. Secondary containment systems must be designed, constructed and installed to:

003.02A1. Contain regulated substances released from the tank system until they are detected and removed;

003.02A2. Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

003.02A3. Be checked for evidence of a release at least every 30 days.

[*Note*: The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements.]

003.02B. Double-walled tanks must be designed, constructed, and installed to:

003.02B1. Contain a release from any portion of the inner tank within the outer wall; and

003.02B2. Detect the failure of the inner wall.

003.02C. External liners (including vaults) must be designed, constructed, and installed to:

003.02C1. Contain 100 percent of the capacity of the largest tank within its boundary;

003.02C2. Prevent the interference of precipitation or ground-water intrusion with the ability to contain or detect a release of regulated substances; and

003.02C3. Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

003.02D. Underground piping must be equipped with secondary containment that satisfies the requirements of §003.02A above (e.g., trench liners, jacketing of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with §005.01 below.

003.02E. Other methods of release detection may be used if owners and operators:

003.02E1. Demonstrate to the State Fire Marshal that an alternate method can detect a release of the stored substance as effectively as

any of the methods allowed in §§004.02 - 004.08 below can detect a release of petroleum;

003.02E2. Provide information to the State Fire Marshal on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

003.02E3. Obtain approval from the State Fire Marshal to use the alternate release detection method before the installation and operation of the new UST system.

004. METHODS OF RELEASE DETECTION FOR TANKS.

Each method of release detection for tanks used to meet the requirements of §002 above must be conducted in accordance with the following:

004.01. Inventory control. A daily product inventory control system (or another test of equivalent performance) must be utilized which is capable of detecting a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner (a sample inventory control sheet is included in Appendix A):

004.01A. Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

004.01B. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

004.01C. The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

004.01D. Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

004.01E. Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

004.01F. The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

004.01G. Inventory shall be reconciled on a monthly basis and reconciled records shall be retained for five years.

[*Note*: Practices described in the American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," may be used, where applicable, as guidance in meeting the requirements of this section.]

004.02. Manual tank gauging. Manual tank gauging must meet the following requirements:

004.02A. Tank liquid level measurements are taken at the beginning and ending of a period of time during which no liquid is added to or removed from the tank;

004.02B. Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

004.02C. The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

004.02D. A leak is suspected and subject to the requirements of 006.01B of Chapter 6 if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal Tank Capacity & Dimensions	Weekly Standard (one test)	Monthly Standard (average of four tests)	Minimum Test Duration
550 gallons or less	10 gallons	5 gallons	36 hours
551-999 gallons	13 gallons	7 gallons	36 hours
1,000 gallons (64" x 73")	9 gallons	4 gallons	44 hours

1,000 gallons (48" x 128")	12 gallons	6 gallons	58 hours
1,001-2,000 gallons	26 gallons	13 gallons	36 hours

004.02E. Tanks of 1,000 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 2,000 gallons or less may use this method in place of daily inventory control in §004.01 above in combination with tank tightness testing requirements in §002 of this chapter. Tanks of more than 2,000 gallons nominal capacity may not use this method to meet the requirements of this section.

004.03. Tank tightness testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate with a probability of detection of 95% and a probability of false alarm no more than 5%. Tank tightness tests must be performed when the tank is at least 95% full, while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

004.03A. The tank tightness test shall be conducted in accordance with a code or standard of practice developed by a nationally recognized association or independent testing laboratory.

004.03B. The tank tightness test shall be performed by qualified personnel who possess the requisite training, experience and competence to conduct the test properly, who are present at the facility and who maintain responsible oversight throughout the entire testing procedure, and who have been certified by the manufacturer or developer of the testing equipment as being qualified to perform the test. The tank precision test shall be conducted in strict accordance with the testing procedures developed by the system manufacturer or developer.

004.04. Automatic tank gauging. Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

004.04A. The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; and

004.04B. Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of §004.01 above.

004.05. Vapor monitoring. Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:

004.05A. The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of vapors from releases into the excavation area;

004.05B. The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

004.05C. The measurement of vapors by the monitoring device is not rendered inoperative by the ground water, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days;

004.05D. The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

004.05E. The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

004.05F. In the UST excavation zone, the site is assessed to ensure compliance with the requirements in section 004.05 of this chapter and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

004.05G. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

004.06. Ground-water monitoring. Testing or monitoring for liquids on the ground water must meet the following requirements:

004.06A. The regulated substance stored is immiscible in water and has a specific gravity of less than one;

004.06B. Ground water is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravel, coarse to medium sands, coarse silts or other permeable materials);

004.06B. The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low ground-water conditions;

004.06C. Monitoring wells shall be sealed from the ground surface to the top of the filter pack;

004.06D. Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

004.06E. The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the ground water in the monitoring wells;

004.06F. Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in sections 004.06A-004.06E of this chapter and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

004.06G. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

004.06H. Monitoring wells shall be installed and constructed in accordance with Title 178, Chapter 12 Nebraska Administrative Code ("Regulations Governing Water Well Construction, Pump Installation and Water Well Abandonment Standards" - Nebraska Department of Health.)

004.07. Interstitial monitoring. Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

004.07A. For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product;

[*Note*: The provisions outlined in the Steel Tank Institute's "Standard for Dual Wall Underground Storage Tanks" may be used as guidance for aspects of the design and construction of underground steel double-walled tanks.]

004.07B. For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the UST system and the secondary barrier;

004.07B1. The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10^{-6} cm/sec for the regulated substance stored) to direct a release to the monitoring point and permit its detection;

004.07B2. The barrier is compatible with the regulated substance stored so that a release from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

004.07B3. For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

004.07B4. The ground water, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

004.07B5. The site is assessed to ensure that the secondary barrier is always above the ground water and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and,

004.07B6. Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

004.07C. For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

004.08. Other methods. Any other type of release detection method, or combination of methods, can be used if:

004.08A. It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

004.08B. The State Fire Marshal may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in §§004.03-004.07 of this chapter. In comparing methods, the State Fire Marshal shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the State Fire Marshal on its use to ensure the protection of human health and the environment.

005. METHODS OF RELEASE DETECTION FOR PIPING.

Each method of release detection for piping used to meet the requirements of §002 above must be conducted in accordance with the following:

005.01. Automatic line leak detectors. Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

005.02. Line tightness testing. A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

005.03. Applicable tank methods. Any of the methods in sections 004.05 - 004.07 of this chapter may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

006. RELEASE DETECTION RECORD KEEPING.

All UST system owners and operators must maintain records in accordance with §006 in Chapter 6 demonstrating compliance with all applicable requirements of this chapter. The records must include the following:

006.01. All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for 5 years, or for another reasonable period of time determined by the State Fire Marshal, from the date of installation.

006.02. The results of any sampling, testing, or monitoring must be maintained for at least 5 years, except that the results of tank tightness testing conducted in accordance with §004.03 of this chapter must be retained until the next test is conducted; and

006.03. Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed, or for another reasonable time period determined by the State Fire Marshal. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation.

Legal Citation: Title 159, Chapter 7
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 8 - REPORTING OF RELEASES AND SUSPECTED RELEASES

001. REPORTING OF RELEASES AND SUSPECTED RELEASES.

Owners and operators of UST systems must report to the State Fire Marshal and follow the procedures in §003 of this chapter for any of the following conditions:

001.01. The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).

001.02. Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; and,

001.03. Monitoring results from a release detection method required under §§002 and 003 in Chapter 7, that indicate a release may have occurred unless:

001.03A. The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; or

001.03B. In the case of inventory control, a second month of data does not confirm the initial result.

002. INVESTIGATION DUE TO OFF-SITE IMPACTS.

When required by the State Fire Marshal or Department of Environmental Quality, owners and operators of UST systems must follow the procedures in §003 below to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines,

and nearby surface and drinking waters) that has been observed by the State Fire Marshal or Department of Environmental Quality or brought to their attention by another party.

003. RELEASE INVESTIGATION AND CONFIRMATION STEPS.

Unless corrective action is initiated in accordance with Department of Environmental Quality regulations, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under 001 of this chapter within 7 days, or another reasonable time period specified by the State Fire Marshal, using either the following steps or another procedure approved by the State Fire Marshal:

003.01. System test. Owners and operators must conduct tests (according to the requirements for tightness testing in §004.03 and §005.02 in Chapter 7) that determine whether a leak exists in that portion of the tank that routinely contains product, or the attached delivery piping, or both.

003.01A. Owners and operators must repair, replace or upgrade the UST system, and begin corrective action in accordance with Department of Environmental Quality regulations if the test results for the system, tank, or delivery piping indicate that a leak exists.

003.01B. Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release.

003.01C. Owners and operators must conduct a site check as described in §003.02 below if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.

003.02. Site check. Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release. At a minimum, § 003.03 of Chapter 10 of this Code shall be used to comply with the requirements of this section.

003.02A. If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators must begin corrective action in accordance with Department of Environmental Quality regulations;

003.02B. If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation is not required.

004. REPORTING AND CLEANUP OF SPILLS AND OVERFILLS.

004.01. Owners and operators of UST systems must contain and immediately clean up a spill or overfill and immediately report to the State Fire Marshal and Department of Environmental Quality and begin corrective action in accordance with Department of Environmental Quality regulations in the following cases:

004.01A. Spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or that causes a sheen on nearby surface water; and

004.01B. Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR 302).

004.02. Owners and operators of UST systems must contain and immediately clean up a spill or overfill of petroleum that is less than 25 gallons, and a spill or overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours, owners and operators must immediately notify the State Fire Marshal.

[**Note**: A release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately to the National Response Center under sections 102 and 103 of the CERCLA and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.]

005. RELEASE RESPONSE AND CORRECTIVE ACTION.

Confirmed or suspected releases of regulated substances from any tank must be reported to the State Fire Marshal and the Department of Environmental Quality within 24 hours by the owner or the person in charge of the tank. The State Fire

Marshal and the Department of Environmental Quality can be contacted at their offices during normal working hours, and at (402) 471-4545 after hours.

005.01. The State Fire Marshal shall determine the immediate danger presented by the release and shall take any steps necessary to assure immediate public safety.

005.02. The State Fire Marshal shall assist the Department of Environmental Quality in determining the source of the release and ensuring that the release is halted.

Legal Citation: Title 159, Chapter 8
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 9 - FINANCIAL RESPONSIBILITY

001. The financial responsibility provisions apply to owners and operators of all petroleum UST systems except those exempted in §003 of this Chapter.

002. Owners and operators of petroleum UST systems are subject to the requirements of this chapter if they are in operation on or after the effective date of these regulations.

003. Financial responsibility requirements shall not apply to the following groups of tank owners and operators:

003.01. State and federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States.

003.02. Owners and operators of tanks excluded or deferred in §002 of Chapter 1 of this Title.

004. If the owner and operator of a petroleum UST are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in the event of noncompliance.

005. DEFINITIONS

005.01. "Accidental release" means any sudden or nonsudden release of petroleum from an underground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator.

005.02. "Bodily injury" shall have the meaning given to this term by applicable state law; however, this term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury.

005.03. "Chief Financial officer," in the case of local government owners and operators, means the individual with the overall authority and responsibility for the collection, disbursement and use of funds by the local government.

005.04. "Controlling interest" means direct ownership of at least 50 percent of the voting stock of another entity.

005.05. "Financial reporting year" means the latest consecutive twelve-month period for which any of the following reports used to support a financial test is prepared:

005.05A. a 10-K report submitted to the SEC;

005.05B. an annual report of tangible net worth submitted to Dun and Bradstreet; or

005.05C. annual reports submitted to the Energy Information Administration or the Rural Electrification Administration.

"Financial reporting year" may thus comprise a fiscal or a calendar year period.

005.06. "Legal defense cost" is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought,

005.06A. By EPA or a state to require corrective action or to recover the costs of corrective action;

005.06B. By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or

005.06C. By any person to enforce the terms of a financial assurance mechanism.

005.07. "Local government" shall mean political subdivisions of the State of Nebraska as defined by state statute.

005.08. "Occurrence" means an accident, including continuous or repeated exposure to conditions, which results in a release from an underground storage tank. Note: This definition is intended to assist in the understanding of these regulations and is not intended either to limit the meaning of "occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of "occurrence."

005.09. "Owner or operator," when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances.

005.10. "Petroleum marketing facilities" include all facilities at which petroleum is produced or refined and all facilities from which petroleum is sold or transferred to other petroleum marketers or to the public.

005.11. "Petroleum marketing firm" shall mean any firm which owns petroleum marketing facilities.

005.12. "Property damage" shall have the meaning given this term by applicable state law. This term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.

005.13. "Provider of financial assurance" means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in §§280.95 - 280.103 of 40 CFR Part 280, Subpart H, including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, issuer of a state-required mechanism, or a state.

005.14. "Substantial business relationship" means the extent of a business relationship necessary under Nebraska law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.

005.15. "Substantial governmental relationship" means the extent of a governmental relationship necessary under Nebraska law to make an added guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from a clear commonality of interest in the event of an UST release such as coterminous boundaries, overlapping constituencies, common ground-water aquifer, or other relationship other than monetary compensation that provides a motivation for
the guarantor to provide a guarantee.

005.16. "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.

006. AMOUNT AND SCOPE OF FINANCIAL RESPONSIBILITY

006.01. Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

006.01A. For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year; $1 million.

006.01B. For all other owners or operators of petroleum underground storage tanks; $500,000.

006.02. Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:

006.02A. For owners or operators of 1 to 100 petroleum underground storage tanks, $1 million; and

006.02B. For owners or operators of 101 or more petroleum underground storage tanks, $2 million.

006.03. For the purposes of §§006.02 and 006.06 of this chapter, only, "a petroleum underground storage tank" means a single containment unit and does not mean combinations of single containment units.

006.04. Except as provided in §006.05 of this chapter, if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:

006.04A. Taking corrective action;

006.04B. Compensating third parties for bodily injury and property damage caused by sudden accidental release; or

006.04C. Compensating third parties for bodily injury and property damage caused by nonsudden accidental releases, the amount of assurance provided by each mechanism or combination of mechanisms must be in the full amount specified in §§006.01 and 006.02 of this chapter.

006.05. If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.

006.06. Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance must be provided exceeds 100, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.

006.07. The amounts of assurance required under this section exclude legal defense costs.

006.08. The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.

007. ALLOWABLE MECHANISMS AND COMBINATIONS OF MECHANISMS

007.01. An owner or operator may use any one or a combination of the mechanisms listed in §§280.95 through 280.105 of 40 CFR Part 280, Subpart H, to demonstrate financial responsibility under this chapter for one or more petroleum underground storage tanks. These mechanisms are found in the Appendix and are hereby incorporated by this reference.

007.02. A local government owner or operator may use any one or combination of the mechanisms listed in §§280.104 through 280.107 of 40 CFR Part 280, Subpart H, to demonstrate financial responsibility under this chapter for one or more underground storage tanks. These mechanisms are found in the Appendix and are hereby incorporated by this reference.

007.03. An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirement of the financial test under the federal rule, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

008. SUBSTITUTIONS OF FINANCIAL ASSURANCE MECHANISMS BY OWNER OR OPERATOR

008.01. An owner or operator may substitute any alternate financial assurance mechanisms as specified in this chapter, provided that at all times he or she maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of §§006 and 007.

008.02. After obtaining alternate financial assurance as specified in this chapter, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

009. CANCELLATION OR NONRENEWAL BY A PROVIDER OF FINANCIAL ASSURANCE

009.01. Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.

009.01A. Termination of a local government guarantee, a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

009.01B. Termination of insurance or risk retention group coverage, except for non-payment or misrepresentation by the assured, or state funded assurance may not occur until 60 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for non-payment of premium or misrepresentation by the insured may not occur until a minimum of 10 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

009.02. If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in §011, the owner or operator must obtain alternate coverage as specified in this section within 60 days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage

within 60 days after receipt of the notice of termination, the owner or operator must notify the State Fire Marshal of such failure and submit:

009.02A. The name and address of the provider of financial assurance;

009.02B. The effective date of termination; and

009.02C. The evidence of the financial assistance mechanism subject to the termination maintained in accordance with §012.02.

010. REPORTING BY OWNER OR OPERATOR

010.01. An owner or operator must submit the appropriate forms listed in §011.02 documenting current evidence of financial responsibility to the State Fire Marshal, FLST Division:

010.01A. Within 30 days after the owner or operator identifies a release from an underground storage tank required to be reported under Chapter 8.

010.01B. If the owner or operator fails to obtain alternate coverage as required by this chapter, within 30 days after the owner or operator receives notice of:

010.01B1. Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a provider of financial assurance as a debtor,

010.01B2. Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism,

010.01B3. Failure of a guarantor to meet the requirements of the financial test,

010.01B4. Other incapacity of a provider of financial assurance; or

010.01C. As required by §280.95(g) of 40 CFR Part 280, Subpart H and §009.02 of this chapter.

010.02. An owner or operator must certify compliance with the financial responsibility requirements of this chapter as specified in the new tank notification form when notifying the State Fire Marshal of the installation of a new underground storage tank.

010.03. The State Fire Marshal may require an owner or operator to submit evidence of financial assurance as described in §011.02 or other information relevant to compliance with this chapter at any time.

011. RECORD KEEPING

011.01. Owners or operators must maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this chapter for an underground storage tank until released from the requirements of this chapter under §012. An owner or operator must maintain such evidence at the underground storage tank site or another location approved by the State Fire Marshal.

011.02. An owner or operator must maintain the following types of evidence of financial responsibility:

011.02A. An owner or operator using an assurance mechanism specified in §007.01 must maintain a copy of the instrument worded as specified.

011.02B. An owner or operator using a financial test or guarantee, or a local government financial test, or a local government guarantee supported by the local government financial test must maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence must be on file no later than 120 days after the close of the financial reporting year.

011.02C. An owner or operator using a guarantee, surety bond, or letter of credit must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

011.02D. An owner or operator using an insurance policy or risk retention group coverage must maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.

011.02E. A local government owner or operator using a local government guarantee under §280.106(d) of 40 CFR Part 280, Subpart H, must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreements.

011.02F. A local government owner or operator using the local government bond rating test under §280.104 of 40 CFR Part 280, Subpart H, must maintain

a copy of its bond rating published within the last twelve months by Moody's or Standard & Poor's.

011.02G. A local government owner or operator using the local government guarantee under §280.106 of 40 CFR Part 280, Subpart H, where the guarantor's demonstration of financial responsibility relies on the bond rating test under §280.104 of 40 CFR Part 280, Subpart H, must maintain a copy of the guarantor's bond rating published within the last twelve months by Moody's or Standard & Poor's.

011.02H. An owner or operator covered by a state fund or other state assurance must maintain on file a copy of any evidence of coverage supplied by or required by the state under §280.101(d) of 40 CFR Part 280, Subpart H.

011.02I. An owner or operator using a local government fund under §280.107 of 40 CFR Part 280, Subpart H, must maintain the following documents:

011.02I1. A copy of the state constitutional provision or local government statute, charter, ordinance, or order dedicating the fund, and

011.02I2. Year-end financial statements for the most recent completed financial reporting year showing the amount in the fund. If the fund is established under §280.107(a)(3) of 40 CFR Part 280, Subpart H, using incremental funding backed by bonding authority, the financial statements must show the previous year's balance, the amount of funding during the year, and the closing balance in the fund.

011.02I3. If the fund is established under §280.107(a)(3) of 40 CFR Part 280, Subpart H, using incremental funding backed by bonding authority, the owner or operator must also maintain documentation of the required bonding authority, including either the results of voter referendum (under §280.107(a)(3)(i)), or attestation by the State Attorney General as specified under §280.107(a)(3)(ii) of 40 CFR Part 280, Subpart H.

011.01J. A local government owner or operator using the local government guarantee supported by the local government fund must maintain a copy of the guarantor's year-end financial statements for the most recent completed financial reporting year showing the amount of the fund.

011.02K. An owner or operator using an assurance mechanism specified in §§280.95 through 280.102 of 40 CFR Part 280, Subpart H, must maintain an

updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Financial Responsibility

[Owner or operator] hereby certifies that it is in compliance with the requirements of Chapter 9, Title 159, NAC.
The financial assurance mechanism[s] used to demonstrate financial responsibility under this title is [are] as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases."]

[Signature of owner or operator]
[Name of owner or operator]
[Title]
[Date]
[Signature of witness or notary]
[Name of witness or notary]
[Date]

The owner or operator must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

012. RELEASE FROM THE REQUIREMENTS

An owner or operator is no longer required to maintain financial responsibility under this chapter for an underground storage tank after the tank has been permanently closed or, if corrective action is required, after corrective action has been completed and the tank has been properly closed as required by Chapter 10 of this title.

013. BANKRUPTCY OR OTHER INCAPACITY OF OWNER OR OPERATOR OF PROVIDER OF FINANCIAL ASSURANCE

013.01. Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as

debtor, the owner or operator must notify the State Fire Marshal by certified mail of such commencement and submit the appropriate forms listed in §011.02 documenting current financial responsibility.

013.02. Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor must notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in §280.96 of 40 CFR Part 280, Subpart H.

013.03. Within 10 days after commencement of a of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a local government owner or operator as debtor, the local government owner or operator must notify the State Fire Marshal by certified mail of such commencement and submit the appropriate forms listed in §011.02 documenting current financial responsibility.

013.04. Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing a local government financial assurance as debtor, such guarantor must notify the local government owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in §280.106 of 40 CFR Part 280, Subpart H.

013.05. An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator must obtain alternate financial assurance as specified in this chapter within 30 days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within 30 days after such notification, he or she must notify the State Fire Marshal.

013.06. Within 30 days after receipt of notification that a state fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator must obtain alternate financial assurance.

Legal Citation: Title 159, Chapter 9
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 10 - OUT-OF-SERVICE UST SYSTEMS AND CLOSURE REQUIREMENTS

001. OUT-OF-SERVICE TANKS.

001.01. TEMPORARILY OUT OF SERVICE TANKS. When an UST system is taken temporarily out of service, owners and operators must continue operation and maintenance of corrosion protection in accordance with §002 in Chapter 6, and any release detection in accordance with Chapter 7. Chapter 8 must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue or 0.3 percent by weight of the total capacity of the UST system, remain in the system.

001.02. When an UST system is taken temporarily out of service for 3 months or more, owners and operators must also comply with the following requirements:

001.02A. Leave vent lines open and functioning; and

001.02B. Cap and secure all other lines, pumps, manways, and ancillary equipment.

001.03. When an UST system is taken temporarily out of service for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in Chapter 4 for new UST systems or the upgrading requirements in Chapter 5, except that the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems at the end of this 12-month period in accordance with §§002-005 of this chapter, unless the State Fire Marshal provides an extension of the 12-month temporary out of service period. Owners and operators must complete a site assessment in accordance with §003 of this chapter before such an extension can be applied for. If an extension is granted, an owner or operator must perform a tightness test on the tank and piping prior to placing the tank back in service.

001.04. PERMANENTLY OUT OF SERVICE TANKS. When a tank is taken permanently out of service for more than 12 months, owners and operators must permanently close the UST system.

002. PERMANENT CLOSURE AND CHANGES-IN-SERVICE.

002.01. At least (30) days before beginning either permanent closure or a change in service under §002.02 and §002.03 below, owners and operators must notify the State Fire Marshal of their intent to permanently close or make the change in service.

002.02. To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludge. All tanks permanently closed must also be either removed from the ground or filled with an inert solid material. Permanent closures shall be done only by a licensed contractor (Chapter 3) and require a permit pursuant to Chapter 2.

002.03. Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with §003 below.

[*Note*: The following cleaning and closure procedures may be used to comply with this section:

American Petroleum Institute Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks";

American Petroleum Institute Publication 2015, "Cleaning Petroleum Storage Tanks";

American Petroleum Institute Recommended Practice 1631, "Interior Lining of Underground Storage Tanks," may be used as guidance for compliance with this section; and

The National Institute for Occupational Safety and Health "Criteria for a Recommended Standard...Working In Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.]

003. ASSESSING THE SITE AT CLOSURE OR CHANGE-IN-SERVICE.

003.01. Before a permanent closure or a change-in-service is completed, owners and operators must perform a closure assessment to measure for the presence of a release where contamination is most likely to be present at the UST site.

003.01A. If free product is present on the ground water or contamination discovered in the soils or in the ground water at the time a tank is removed, this sampling procedures portion of this assessment report does not need to be performed provided the Department of Environmental Quality is notified and the owner and/or operator begins remedial action in accordance with Department of Environmental Quality regulations.

003.01B. The requirements of this section are satisfied if one of the external release detection methods allowed in Chapter 7 is operating in accordance with the requirements in §004.05 and §004.06 of that chapter at the time of closure, and indicates that no release has occurred.

003.02. Analysis of samples. Soil and ground water samples taken at time of closure shall be analyzed by laboratory methods to detect and quantify the presence of the regulated substance last stored in the tank system.

003.02A. Samples shall be analyzed using test methodologies, procedures, and instrumentation approved by the Department of Environmental Quality. At a minimum the following additional requirements must be met:

003.02A1. Test methodology procedures regarding proper handling and preservation of samples shall be followed.

003.02A2. Proper chain of custody shall be maintained for each sample.

003.02A3. Samples shall be immediately sealed in their appropriate containers after collection.

003.03. In-Place Closure Assessment

003.03A. Soil borings must provide the necessary data to document site conditions. The soil borings shall be a minimum of two inches in diameter and be completed using a hollow stem auger drilling. Evidence of petroleum contamination in the soils or ground water and the corresponding depth of

contamination shall be documented in the State Fire Marshal closure assessment report. Notification of any contamination shall be made in accordance with §004.02 of this chapter.

003.03B. Tank Assessment

003.03B1. One boring shall be drilled through the backfill at each end of each tank. If the distance between any of the borings exceeds 25 feet, as measured along the excavation perimeter, a boring midway between the two is necessary.

003.03B2. All borings shall continue until soil contamination or ground water is encountered. Borings may continue after contamination is discovered, but soil or ground water samples shall be collected at the point at which contamination is initially encountered; and

003.03B3. One soil sample shall be collected for every five (5) feet of boring advancement and each sample shall be analyzed in accordance with the procedures in §003.02 above. If ground water is encountered, one sample of ground water shall be collected and analyzed at the base of each boring.

003.03B4. Soil samples shall be collected in a manner to minimize disturbance of the soil structure. The predominant soil type of each sample (e.g., clay, sand, gravel) shall be recorded separately and submitted on a boring log as an addendum to the closure assessment report.

003.03C. Line Assessment

003.03C1. One boring shall be drilled at the point where the product lines leave the tank excavation.

003.03C2. One boring shall be drilled within three (3) feet of each dispenser island. The borings shall be placed in the best estimated down gradient direction of ground water flow.

003.03C3. If the running length of the product line between the borings required in (C1) and (C2) above exceeds 25 feet, additional borings shall be placed so borings are equally spaced and there is never more than 25 feet between any borings.

003.03C4. All product line borings shall conform to §003.03B2 of this chapter.

003.03C5. Samples shall be collected and analyzed as required in §003.03B3 and §003.03B4 of this chapter.

003.04. Removal Closure Assessment. All underground storage tanks and all product piping shall be inspected for corrosion holes and/or other points of leakage. A description of the inspection methods, and if leakage is verified, a description of the cause and location must be submitted to the State Fire Marshal in the closure assessment report. Notification of any contamination shall be made in accordance with §004.02 of this chapter.

003.04A. Each tank and its associated piping shall be visually inspected for holes, cracks, corrosion or any signs of leakage. All welds and seams must be thoroughly scraped and inspected. The capacity of each tank shall be recorded. Results of these inspections shall be documented in the State Fire Marshal closure assessment report.

003.04B. All piping must be exposed and inspected in place.

003.05. Tank Excavation

003.05A. Backfill material shall be removed to expose undisturbed native soils at the base of the excavation.

003.05B. The base of the excavation shall be inspected for contamination and, if present, the owner/operator has the option to over excavate all areas of contamination until clean soils are encountered. Overexcavation done in this manner is subject to Department of Environmental Quality remedial action regulations. To verify that soils are free of contamination, soil samples shall be collected and analyzed at this point.

003.05C. The final disposal location of contaminated soil shall be reported on the State Fire Marshal closure assessment report. Soil disposal procedures are subject to Department of Environmental Quality oversight.

003.05D. A minimum of two samples per tank shall be collected and analyzed from the undisturbed native soils at the base of the excavation. Sample locations shall correspond to points of leakage from the tank or line. If no leakage was found, one sample shall be collected and analyzed at each end of the tank at the

base of the excavation. If ground water is encountered during sampling, the sample media must be water.

003.06. Line Excavation Assessment

003.06A. All product piping shall be removed by trenching and exposing the entire length of the lines.

003.06B. The procedures described in §003.04A and §003.04B of this chapter shall be followed.

003.06C. A soil sample from native soil at the base of the piping excavation shall be collected and analyzed at areas of obvious contamination or points of leakage or, if no leakage is observed, one sample shall be taken every ten (10) feet, beginning at the tank excavation perimeter and extending to the dispensers.

003.06D. The base of the excavation shall be inspected for contamination and, if present, the owner/operator may over excavate according to the procedures in §003.05B and §003.05C above.

004. REPORTING REQUIREMENTS

004.01. Certification of Compliance

004.01A. A certification of compliance with Title 159 regulations shall be required for every closure or change in service.

004.02. Notification of Release

004.02A. Notification shall be made within 24 hours whenever contamination is discovered. The owner/operator shall report to the Nebraska Department of Environmental Quality and the State Fire Marshal in accordance with Chapter 8 of this title.

004.02B. When public safety threats are identified during a closure assessment, the State Fire Marshal shall be notified immediately.

004.03. Closure Assessment Report

004.03A. The owner/operator is responsible for ensuring the closure assessment report is properly completed and submitted on the appropriate State Fire Marshal

reporting forms. The report shall be submitted to the State Fire Marshal with 45 days of the date of removal or closure in place. This report shall contain at a minimum:

004.03A1. The sample custody record, the name of the laboratory that was used and the original laboratory data sheets shall be submitted with the report.

004.03A2. A site drawing of the tank system (tanks and product lines) placement and/or excavation and dispenser(s) location. The site drawing shall be to scale, including distances and directions as measured. The relationship of the tank system to permanent objects, such as curbs or buildings, must be depicted in order to facilitate location at a later date. The location of the facility shall be placed on a separate map (e.g., 7.5 minute quadrangle, city, county, highway, hand drawn) or described in a narrative. The map or narrative shall provide the exact location of the facility in relation to cross streets or other map benchmarks.

004.03A3. The location at which samples were collected.

004.03A4. The type of regulated substance last stored in the tank.

004.03A5. A description of the contaminated soil disposal method and final disposal location.

004.03A6. The completed Certification of Compliance.

004.03A7. The completed tank closure checklist.

004.03A8. The actual tank dimensions.

004.03B. The report shall be submitted to:

State Fire Marshal
Flammable Liquid Storage Division
246 South 14th Street
Lincoln, NE 68508-1804

005. APPLICABILITY TO PREVIOUSLY CLOSED UST SYSTEMS

When directed by the State Fire Marshal, the owner and operator of an UST system permanently closed before January 1, 1989 must assess the excavation zone and close the UST system in accordance with this chapter if there is a reasonable probability that releases from the UST may, in the judgment of the State Fire Marshal, pose a current or potential threat to human health and the environment.

006. CLOSURE RECORDS.

Owners and operators must maintain records in accordance with §006 in Chapter 6 that are capable of demonstrating compliance with closure requirements under this chapter.

Legal Citation: Title 159, Chapter 10
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 11 - DUTY OF DEPOSITORS

001. Any person who deposits regulated substances in a tank shall reasonably notify the owner or operator of such tank of registration requirements pursuant to the Petroleum Products and Hazardous Substances Storage and Handling Act.

001.01. Printed notices of registration requirements may be obtained from the Department of Environmental Quality.

Legal Citation: Title 159, Chapter 11
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 12 - INSPECTIONS

001. Periodic safety inspections shall be conducted by State Fire Marshal personnel. All tanks shall be subject to at least one inspection annually.

001.01. Inspections shall include, but not be limited to, inspection of release detection records, release detection equipment, vent pipes and dispenser systems, corrosion protection records, and applicable fire safety codes.

001.02. Findings of irregularities or insufficient record or monitoring procedures may result in an order by the State Fire Marshal to correct all such problems. State Fire Marshal personnel shall perform a follow-up inspection to insure compliance with the order. At that time, all tanks found not in compliance shall have their operating permits suspended or revoked until such time as the order is followed.

002. Periodic spot checks of tank monitoring systems shall be conducted by State Fire Marshal personnel.

002.01. Inspections shall cover monitoring systems and inventory control procedures.

Legal Citation: Title 159, Chapter 12
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 13 - EFFECTIVE DATE AND REPEAL OF EARLIER RULES

001. These rules and regulations shall become effective five (5) days after filing with the Secretary of State. Upon adoption of these rules and regulations, prior, inconsistent rules and regulations shall be repealed.

Legal Citation: Title 159, Chapter 13
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 14 - ENFORCEMENT

001. Any person violating the Petroleum Products and Hazardous Substances Storage and Handling Act or the rules, regulations, or orders of the State Fire Marshal or the Department of Environmental Quality adopted or issued pursuant to such act shall be subject to a civil fine of not more than five thousand dollars for each offense and, in the case of a continuing violation, each day of violation shall constitute a separate offense. In assessing the amount of the fine, the court shall consider the size of the operation and the degree and extent of pollution.

002. The Department of Environmental Quality or the State Fire Marshal may apply to the district court of the county where the violation is occurring or about to occur for a restraining order, a temporary or permanent injunction, or a mandatory injunction against any person violating or threatening to violate the Petroleum Products and Hazardous Substances Storage and Handling Act or the rules, regulations, or orders adopted and promulgated under the act. The Court shall have jurisdiction to grant relief upon good cause shown. Relief may be granted notwithstanding the existence of any other remedy at law and shall be granted without bond.

Legal Citation: Title 159, Chapter 14
Nebraska State Fire Marshal

Title 159 - STATE FIRE MARSHAL

Chapter 15 - SEVERABILITY

001. If any clause, paragraph, subsection or section of these regulations shall be held invalid, it shall be conclusively presumed that the State Fire Marshal would have enacted the remainder of these regulations not directly related to such clause, paragraph, subsection or section.

Legal Citation: Title 159, Chapter 15
Nebraska State Fire Marshal

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